pared to that "of *Tfaylacinus* or *Dissacus" No* one can examine the actual sketches of the skull of that Theriodont without endorsing that opinion. As a curious detailed point of likeness to certain Mammalia may be mentioned " a small descending process of the malar bone, which may be a diminutive representative of the descending element of the malar seen in *JSlotherium-, NototJieriutn, Diprotodon, Macropus,* certain Edentata, such as *Glyptodon, Megatherium, Mylodon, JBradypus,* but unparalleled so far as I am aware in fossil reptiles." (Osborn.) The zoologist cannob help being impressed with the significance of small details of similarity, which do not seem to be due in any way to surrounding conditions of life, and thus referable to mere convergence, like the fish-like form of Whales and Seals.

The rest of the skeleton of the Theriodontia is by no means so well known as the skull and teeth. But from what is known, other mammalian characters can be pointed out. Perhaps the most striking mammalian feature is to be found in the scapula of *Cynognathus.* It is in this creature somewhat narrow and elongated; but it has a well-marked spine, ending in a hooked acromion. IsTow it is to be noted in support, so far, of the diphyletic origin of mammals, that in the Monotreme, as in Whales indeed, the spine forms the anterior border of the scapula, and is coincident with it, there being thus no prescapula at all in the Monotreme, and only a trace of it in certain Whales.[1] Whether the multituberculate *Tritylodon* or *Diademodon* had a scapula after the Monotreme pattern is not known; but it is clear that the scapula of the triconoaont *C/ynognathus* is quite after the pattern, of the Eutherian scapula. Furthermore, Professor Seeley is of opinion that the coracoid was relatively small, and indeed smaller than the same bone in Edentates, and *a fortiori* than in Monotremes. Another fact of structure which points also, possibly, in the direction of a diphyletic origin for the Mammalia, is the double-headed ribs of *Gynognatl^us.* As is well known, the ribs of the Monotremata have only the

central head, the capitTolrim,

As a general mark of affinity with mammals the reduction of the intercentra in *Cynogntxthus* may be noted, and also the existence of a small though perfectly obvious obturator-foramen, separating the puMs from the ischium. There are further details

[1] It may be necessary to **exclude** the Whales from the comparison.